

Wireless Hybrid Identification and Sensing Platform for Equipment Recovery (WHISPER), Phase II

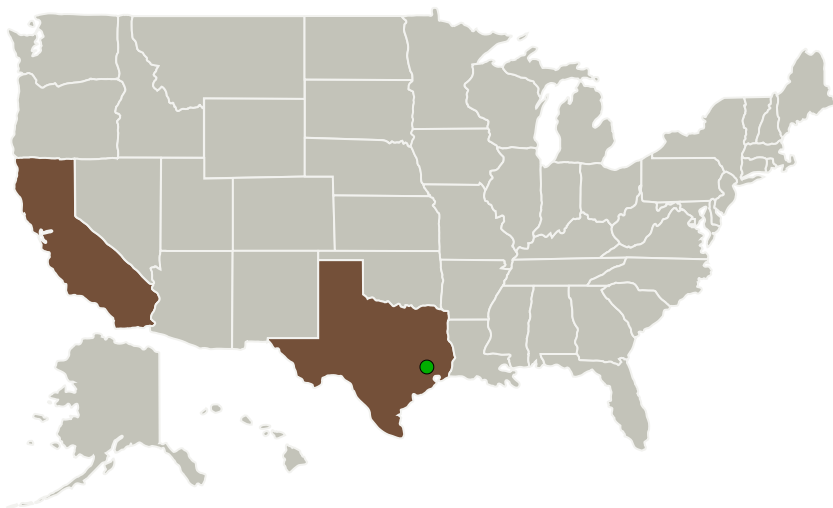
Completed Technology Project (2015 - 2019)




Project Introduction

Advanced Systems & Technologies proposed WHISPER (Wireless Hybrid Identification and Sensing Platform for Equipment Recovery) solution to NASA's need for automatic location and tracking of a large number of individual crew items in a space habitat microgravity cabin is to combine an EPCglobal compliant RFID smart augmented tag (a dime-sized device that is powered and read by off-the-shelf UHF RFID readers and contains a microcontroller and INS) with an IR sensor that works in conjunction with AS&T's existing Particle-swarm, Ubiquitous, Projector-based Positioning Ergodic Transformation (PUPPET) system. This will enable simple wireless location tracking of an unlimited number of items such as fasteners, hand tools, and clothing but would also do more complex orientation and velocity tracking. WHISPER modules can also be attached cold thruster maneuver platforms or even personnel for monitoring tasks or exercise.

Primary U.S. Work Locations and Key Partners



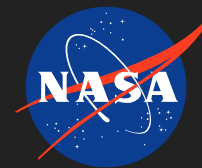
Organizations Performing Work	Role	Type	Location
Advanced Systems & Technologies, Inc.	Lead Organization	Industry	Irvine, California
 Johnson Space Center(JSC)	Supporting Organization	NASA Center	Houston, Texas



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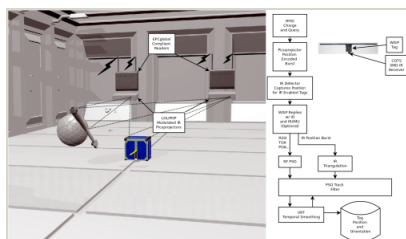


Primary U.S. Work Locations

California

Texas

Images



Briefing Chart

Wireless Hybrid Identification and Sensing Platform for Equipment Recovery (WHISPER) Briefing Chart (<https://techport.nasa.gov/image/135428>)

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Organization:

Advanced Systems &
Technologies, Inc.

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Principal Investigator:

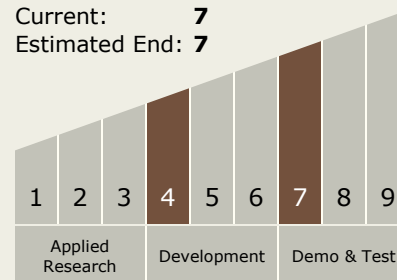
Stephen Kupiec

Technology Maturity (TRL)

Start: **4**

Current: **7**

Estimated End: **7**



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Technology Areas

Primary:

- TX07 Exploration Destination Systems
 - └ TX07.2 Mission Infrastructure, Sustainability, and Supportability
 - └ TX07.2.1 Logistics Management

Target Destinations

The Sun, Earth, The Moon, Mars, Others Inside the Solar System, Outside the Solar System